AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Previously Presented). A method for propagating replication-defective adenovirus in an adenoviral E1-complementing cell line where the adenoviral E1-complementing cell line expresses an E1 gene product(s) which is not of the same serotype as the replication-defective adenovirus, which comprises:

(a) inserting all or a portion of a heterologous adenoviral E4 region comprising a nucleic acid sequence encoding open reading frame 6 (ORF6) into a replication-defective adenovirus; wherein the E4 region or portion thereof is of the same adenovirus serotype as the E1 gene product(s) expressed by the complementing cell line;

(b) introducing the replication-defective adenovirus into the adenoviral E1-complementing cell line;

(c) allowing the replication-defective adenovirus to propagate in the adenoviral E1-complementing cell line; and

(d) rescuing the propagated adenovirus.

Claim 2 (Previously presented). The method of claim 1 wherein the heterologous adenoviral E4 region or portion thereof comprises the complete adenoviral E4-encoding region.

Claim 3 (Previously presented). The method of claim 2 wherein the heterologous adenoviral E4 region or portion thereof comprises the complete adenoviral E4-encoding region and native E4 promoter.

Claim 4 (Previously presented). The method of claim 1 wherein the heterologous adenoviral E4 region or portion thereof is inserted into the replication-defective adenovirus in place of nucleic acid sequence encoding open reading frame 6 (ORF6).

Claim 5 (Previously presented). The method of claim 1 wherein the heterologous adenoviral E4 region or portion thereof is inserted into the replication-defective adenovirus in place of nucleic acid sequence encoding the complete adenoviral E4-encoding region.

Claim 6 (Previously presented). The method of claim 1 wherein the heterologous adenoviral E4 region or portion thereof is derived from a subgroup C adenovirus.

Claim 7 (Previously presented). The method of claim 6 wherein the subgroup C adenovirus is adenovirus of serotype 5.

Claim 8 (Previously presented). The method of claim 7 wherein the replication-defective adenovirus is an adenovirus of subgroup B.

Claim 9 (Previously presented). The method of claim 7 wherein the replication-defective adenovirus is an adenovirus of serotype 35.

Claim 10 (Previously presented). The method of claim 1 wherein the heterologous adenoviral E4 region or portion thereof is operatively linked to a heterologous promoter.

Claim 11 (Amended). The method of claim 1 wherein the adenoviral E1-complementing cell line is ~~a PER.C6®~~ an Ad5 E1-complementing cell line.

Claim 12 (Withdrawn). A replication-defective adenovirus comprising all or a portion of a heterologous E4 region comprising a heterologous adenoviral open reading frame 6 (ORF6).

Claim 13 (Withdrawn). A replication-defective adenovirus in accordance with claim 12 wherein the adenovirus comprises a heterologous gene of interest.

Claim 14 (Withdrawn). A replication-defective adenovirus in accordance with claim 13 wherein the heterologous gene of interest is a gene encoding an HIV-1 antigen.

Claim 15 (Withdrawn). A replication-defective adenovirus in accordance with claim 14 wherein the HIV-1 antigen is selected from the group consisting of HIV-1 gag, pol, nef and env.

Claim 16 (Withdrawn). A replication-defective adenovirus comprising all or a portion of a heterologous E4 region comprising a heterologous adenoviral open reading frame 6 (ORF6) and a gene encoding HIV-1 gag.

Claim 17 (Withdrawn). A replication-defective adenovirus comprising all or a portion of a heterologous E4 region comprising a heterologous adenoviral open reading frame 6 (ORF6) in place of a native E4 region or portion thereof comprising ORF6.

Claim 18 (Withdrawn). A replication-defective adenovirus comprising all or a portion of a heterologous E4 region comprising a complete heterologous E4 region in place of a complete native E4 region.

Claim 19 (Withdrawn). A replication-defective adenovirus comprising a heterologous E4 region or portion thereof comprising a complete heterologous E4 region including E4 promoter in place of a complete native E4 region.

Claim 20 (Withdrawn). Adenovirus propagated in accordance with the means of claim 1.

Claim 21 (Previously presented). The method of claim 1 wherein the replication-defective adenovirus comprises a heterologous gene of interest.

Claim 22 (Previously presented). The method of claim 21 wherein the heterologous gene of interest is a gene encoding an HIV-1 antigen.

Claim 23 (Previously presented). The method of claim 22 wherein the HIV-1 antigen is selected from the group consisting of: HIV-1 gag, pol, nef and env.

Claim 24 (Withdrawn). A replication-defective adenovirus of serotype 35 comprising all or a portion of an adenovirus serotype 5 E4 region comprising open reading frame 6 (ORF6) and a heterologous gene of interest.

Claim 25 (Withdrawn). A replication-defective adenovirus in accordance with claim 24 wherein the heterologous gene of interest is a gene encoding an HIV-1 antigen.

Claim 26 (Withdrawn). A replication-defective adenovirus in accordance with claim 25 wherein the HIV-1 antigen is selected from the group consisting of: HIV-1 gag, pol, nef and env.

Claim 27 (Withdrawn). A replication-defective adenovirus of serotype 35 comprising all or a portion of an adenovirus serotype 5 E4 region comprising open reading frame 6 (ORF6) and a gene encoding HIV-1 gag.

Claim 28 (Withdrawn). A recombinant adenoviral vector of serotype 24 which comprises an E4 gene or a segment of an E4 gene comprising open reading frame 6 ("ORF6") of an alternative serotype.

Claim 29 (Withdrawn). A population of cells comprising the recombinant adenoviral vector of claim 28.

Claim 30 (Withdrawn). A method for producing recombinant, replication-defective adenovirus particles comprising:

(a) introducing a replication-defective adenovirus of serotype 24 which comprises an E4 gene or a segment of an E4 gene comprising ORF6 of an alternative serotype into a population of cells expressing adenovirus E1; and

(b) harvesting the resultant recombinant, replication-defective adenovirus.

Claim 31 (Withdrawn). Purified recombinant, replication-defective adenovirus particles harvested in accordance with the method of claim 30.

Claim 32 (Withdrawn). A composition comprising purified recombinant adenovirus particles in accordance with claim 31.

Claim 33 (Withdrawn). A composition in accordance with claim 32 which comprises a physiologically acceptable carrier.

Claim 34 (Withdrawn). A recombinant adenoviral vector in accordance with claim 28 which is at least partially deleted in E1 and devoid of E1 activity and comprises a heterologous nucleic acid.

Claim 35 (Withdrawn). A composition comprising purified recombinant adenoviral particles in accordance with claim 31 which are at least partially deleted in E1 and devoid of E1 activity and comprise a heterologous nucleic acid.

Claim 36 (Withdrawn). A method for effecting the delivery and expression of heterologous nucleic acid comprising administering the composition of claim 35 prior or subsequent to administration of the heterologous nucleic acid with the same or different vector.

Claim 37 (Withdrawn). A method in accordance with claim 36 wherein the composition is preceded or followed by administration of heterologous nucleic acid with an adenovirus of a different serotype.

Claim 38 (Withdrawn). A composition in accordance with claim 35 wherein the heterologous nucleic acid encodes an HIV antigen.

Claim 39 (Withdrawn). A method for generating a cellular-mediated immune response against HIV in an individual comprising administering to the individual a composition of claim 38.

Claim 40 (Withdrawn). A composition in accordance with claim 39 wherein the HIV antigen is HIV-1 gag or immunologically relevant modification thereof.

Claim 41 (Withdrawn). A composition in accordance with claim 39 wherein the HIV antigen is HIV-1 nef or immunologically relevant modification thereof.

Claim 42 (Withdrawn). A composition in accordance with claim 39 wherein the HIV antigen is HIV-1 pol or immunologically relevant modification thereof.

Claim 43 (Withdrawn). A recombinant adenoviral vector of serotype 24 which is at least partially deleted in E1 and devoid of E1 activity; wherein said vector comprises an E4 gene or a segment of an E4 gene from adenovirus serotype 5 comprising open reading frame 6 ("ORF6"), and a heterologous nucleic acid.

Claim 44 (Withdrawn). A population of cells comprising the recombinant adenoviral vector of claim 43.

Claim 45 (Previously presented). A method for producing recombinant, replication-defective adenovirus particles comprising:

(a) introducing a recombinant adenoviral vector of serotype 24 which is at least partially deleted in E1 and devoid of E1 activity and comprises an E4 gene or a segment of an E4 gene from adenovirus serotype 5 comprising ORF6 and a heterologous nucleic acid into a population of cells expressing adenovirus serotype 5 E1; and

(b) harvesting the resultant recombinant, replication-defective adenovirus.

Claim 46 (Withdrawn). Purified recombinant, replication-defective adenovirus particles harvested in accordance with the method of claim 45.

Claim 47 (Withdrawn). A composition comprising purified recombinant adenovirus particles in accordance with claim 46.

Claim 48 (Withdrawn). A composition in accordance with claim 47 which comprises a physiologically acceptable carrier.

Claim 49 (Withdrawn). A method for effecting the delivery and expression of the heterologous nucleic acid comprising administering the composition of claim 48 prior or subsequent to administration of the heterologous nucleic acid with the same or different vector.

Claim 50 (Withdrawn). A method in accordance with claim 49 above wherein the composition is preceded or followed by administration of the heterologous nucleic acid with an adenovirus of a different serotype.

Claim 51 (Withdrawn). A composition in accordance with claim 48 wherein the heterologous nucleic acid encodes an HIV antigen.

Claim 52 (Withdrawn). A method for generating a cellular-mediated immune response against HIV in an individual comprising administering to the individual a composition of claim 51.

Claim 53 (Withdrawn). A composition in accordance with claim 51 wherein the HIV antigen is HIV-1 gag or immunologically relevant modification thereof.

Claim 54 (Withdrawn). A composition in accordance with claim 51 wherein the HIV antigen is HIV-1 nef or immunologically relevant modification thereof.

Claim 55 (Withdrawn). A composition in accordance with claim 51 wherein the HIV antigen is HIV-1 pol or immunologically relevant modification thereof.

Claim 56 (Withdrawn). A recombinant adenoviral vector of serotype 34 which comprises an E4 gene or a segment of an E4 gene comprising open reading frame 6 ("ORF6") of an alternative serotype.

Claim 57 (Withdrawn). A population of cells comprising the recombinant adenoviral vector of claim 56.

Claim 58 (Previously presented). A method for producing recombinant, replication-defective adenovirus particles comprising:

(a) introducing a replication-defective adenovirus of serotype 34 which comprises an E4 gene or a segment of an E4 gene comprising ORF6 of an alternative serotype into a population of cells expressing adenovirus E1; and

(b) harvesting the resultant recombinant, replication-defective adenovirus.

Claim 59 (Withdrawn). Purified recombinant, replication-defective adenovirus particles harvested in accordance with the method of claim 58.

Claim 60 (Withdrawn). A composition comprising purified recombinant adenovirus particles in accordance with claim 59.

Claim 61 (Withdrawn). A composition in accordance with claim 60 which comprises a physiologically acceptable carrier.

Claim 62 (Withdrawn). A recombinant adenoviral vector in accordance with claim 56 which is at least partially deleted in E1 and devoid of E1 activity and comprises a heterologous nucleic acid.

Claim 63 (Withdrawn). A composition comprising purified recombinant adenoviral particles in accordance with claim 59 which are at least partially deleted in E1 and devoid of E1 activity and comprise a heterologous nucleic acid.

Claim 64 (Withdrawn). A method for effecting the delivery and expression of heterologous nucleic acid comprising administering the composition of claim 63 prior or subsequent to administration of the heterologous nucleic acid with the same or different vector.

Claim 65 (Withdrawn). A method in accordance with claim 64 wherein the composition is preceded or followed by administration of heterologous nucleic acid with an adenovirus of a different serotype.

Claim 66 (Withdrawn). A composition in accordance with claim 63 wherein the heterologous nucleic acid encodes an HIV antigen.

Claim 67 (Withdrawn). A method for generating a cellular-mediated immune response against HIV in an individual comprising administering to the individual a composition of claim 66.

Claim 68 (Withdrawn). A composition in accordance with claim 67 wherein the HIV antigen is HIV-1 gag or immunologically relevant modification thereof.

Claim 69 (Withdrawn). A composition in accordance with claim 67 wherein the HIV antigen is HIV-1 nef or immunologically relevant modification thereof.

Claim 70 (Withdrawn). A composition in accordance with claim 67 wherein the HIV antigen is HIV-1 pol or immunologically relevant modification thereof.

Claim 71 (Withdrawn). A recombinant adenoviral vector of serotype 34 which is at least partially deleted in E1 and devoid of E1 activity; wherein said vector comprises an E4 gene or a segment of an E4 gene from adenovirus serotype 5 comprising open reading frame 6 ("ORF6"), and a heterologous nucleic acid.

Claim 72 (Withdrawn). A population of cells comprising the recombinant adenoviral vector of claim 71.

Claim 73 (Previously presented). A method for producing recombinant, replication-defective adenovirus particles comprising:

(a) introducing a recombinant adenoviral vector of serotype 34 which is at least partially deleted in E1 and devoid of E1 activity and comprises an E4 gene or a segment of an E4 gene from adenovirus serotype 5 comprising ORF6 and a heterologous nucleic acid into a population of cells expressing adenovirus serotype 5 E1; and

(b) harvesting the resultant recombinant, replication-defective adenovirus.

Claim 74 (Withdrawn). Purified recombinant, replication-defective adenovirus particles harvested in accordance with the method of claim 73.

Claim 75 (Withdrawn). A composition comprising purified recombinant adenovirus particles in accordance with claim 74.

Claim 76 (Withdrawn). A composition in accordance with claim 75 which comprises a physiologically acceptable carrier.

Claim 77 (Withdrawn). A method for effecting the delivery and expression of the heterologous nucleic acid comprising administering the composition of claim 76 prior or subsequent to administration of the heterologous nucleic acid with the same or different vector.

Claim 78 (Withdrawn). A method in accordance with claim 77 above wherein the composition is preceded or followed by administration of the heterologous nucleic acid with an adenovirus of a different serotype.

Claim 79 (Withdrawn). A composition in accordance with claim 76 wherein the heterologous nucleic acid encodes an HIV antigen.

Claim 80 (Withdrawn). A method for generating a cellular-mediated immune response against HIV in an individual comprising administering to the individual a composition of claim 79.

Claim 81 (Withdrawn). A composition in accordance with claim 79 wherein the HIV antigen is HIV-1 gag or immunologically relevant modification thereof.

Claim 82 (Withdrawn). A composition in accordance with claim 79 wherein the HIV antigen is HIV-1 nef or immunologically relevant modification thereof.

Claim 83 (Withdrawn). A composition in accordance with claim 79 wherein the HIV antigen is HIV-1 pol or immunologically relevant modification thereof.